

REMARKS

Claims 1-16 are pending in the present application. Claim 17 has been canceled. Claims 1 and 4-15 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 4,886,452 to Löhn, (hereinafter “Löhn”) in view of U.S. Patent No. 6,283,014 to Ng et al., (hereinafter “Ng”), and either U.S. Patent No. 5,123,839 to West, (hereinafter “West”) or U.S. Patent 5,271,087 to Schmid, (hereinafter “Schmid”), in view of U.S. Patent No. 6,253,964 to Rainey, (hereinafter “Rainey”).

Also, claims 16 and 17 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Rainey or West. Reconsideration is respectfully requested in view of the following argument.

§ 103(a) Rejections:

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. MPEP at § 2142 (emphasis added). Additionally, to rely on a reference, it must be analogous prior art. MPEP at § 2141.01(a) (emphasis added).

The combination of Löhn and Ng or either West or Schmid and Rainey does not teach or suggest all of the claim limitations of independent claim 1. Each of claims 1 and 4-15 recite “at least one media; at least one media valve to allow the at least one media to flow through the dental handpiece; a heating current circuit disposed in the dental handpiece comprising a means for heating the at least one media; at least one hand-actuatable first switch, the at least one hand-actuatable first switch able to activate both the heating current circuit and the at least one media valve; at least one second switch arranged in the heating current circuit, the at least one second switch able to be set into a conducting condition to render the heating current circuit operative or a non-conducting condition to render the heating current circuit inoperative; wherein with the at least one second switch in the conducting condition, the heating current circuit is responsive to actuation of the at least one

first switch to allow heating of the at least one media as the media is conducted through the dental handpiece; and, wherein with the at least one second switch in a non-conducting condition, the heating current circuit is not responsive to actuation of the at least one first switch to allow heating of the at least one media as the media is conducted through the dental handpiece.” None of the cited references disclose or suggest these limitations.

While Löhn, West, and Schmid each describe a dental spray handpiece configured to be manually activated, none of these references alone or in combination disclose or suggest manual activation in combination with an “at least one second switch arranged in the heating current circuit, the at least one second switch able to be set into a conducting condition to render the heating current circuit operative or a non-conducting condition to render the heating current circuit inoperative,” wherein the conducting or non-conducting condition of the second switch renders the heating circuit operative responsive to the first switch, as claimed by claim 1. As the applicant describes, an external control signal is applied to terminals VCC and V_{on} as either a “switch-on signal” or a “switch-off signal” to control media heating in the handpiece in a manner overriding the first switch operation (page 8, lines 19-31 and page 9, lines 1-15). Löhn, however, discloses only a heating device on-off switch which is activated simultaneously with the handpiece’s main pushbutton, e.g., the claimed first switch (col. 2, lines 31-39). Further, West’s manual on/off switch controls the operation of the entire module and not the heating element alone (col. 8, lines 37-39). Lastly, Schmid discloses that “[b]y actuating the pushbutton the switch is closed on the one hand, so that the heater assemblies begin to function. At the time the shut-off valve is opened so that the media can travel through the handpiece to the medium outlet.” (col. 3, lines 22-26). Neither Löhn, West, nor Schmid alone or in combination disclose the “at least one second switch arranged in the heating current circuit, the at least one second switch able to be set into a conducting condition to render the heating current circuit operative or a non-conducting condition to render the heating current circuit inoperative” as claimed by claim 1.

Furthermore, neither Ng nor Rainey disclose or suggest a switch “able to be set into a conducting condition to render the heating current circuit operative or a non-conducting

condition to render the heating current circuit inoperative” responding to operation of the first switch as claimed by claim 1 to provide the missing elements from Löhn, West, and Schmid. As the examiner states, Ng discloses “that it is conventional to have both remote and manual control in a heating device” (11/04/04 action at page 3). Further, Rainey discloses a system to remotely sanitize dental water and air lines (col. 3, lines 1-15). However, the current application claims “at least one second switch able to be set into a conducting condition to render the heating current circuit operative or a non-conducting condition to render the heating current circuit inoperative” and not the “remote control” function disclosed by both Ng and Rainey. Accordingly, the element is not disclosed or suggested by Löhn in view of Ng or either West or Schmid in view of Rainey and claim 1 and all claims dependent thereon are allowable.

Also, neither Ng, Rainey, Schindler, nor Juodikis is in the field of the applicant’s endeavor or reasonably pertinent to the particular problem with which the inventor was concerned and analogous to the applicant’s invention. MPEP § 2141.01(a). The problem the applicant faced concerned how to completely switch off media heating of a dental handpiece via an external control signal so that even upon opening of a media valve, no heating would occur (page 3, lines 11-18). However, Ng, Rainey, Schindler, and Juodikis each concerns operating a device remotely. Ng describes a system that permits remote operation of the device while reserving local control when the user returns home and switches the device off. Ng’s remote control does not disable the local control. As claimed in claim 1, the element “at least one second switch able to be set into a conducting condition to render the heating current circuit operative or a non-conducting condition to render the heating current circuit inoperative” does not allow for remote control of the handpiece. Therefore, one of ordinary skill in the art at the time of applicant’s invention would not be motivated to combine the teachings of Löhn with Ng et al. because Ng et al. is not analogous. Similarly, none of Rainey (which describes remotely controlling a flushing system), Schindler (which describes a temperature control circuit for a point-of-use water heater), and Joudikis (which describes a temperature controller for use with an electrical heater for maintaining temperature at a

selected set point), teach or suggest “at least one second switch able to be set into a conducting condition to render the heating current circuit operative or a non-conducting condition to render the heating current circuit inoperative” as claimed in claim 1. One of ordinary skill in the art at the time of applicant’s invention would not be motivated to combine the teachings of Lohn with either Ng, Rainey, Schindler, or Joudikis because none of these references is analogous to the applicant’s endeavor. Therefore, claim 1 and all claims dependent thereon are allowable.

§ 102(b) Rejections

To anticipate a claim, under 35 U.S.C. § 102(b), a reference must teach each and every element of the claim. Neither Rainey nor West discloses claim 16.

The official action alleges that Rainey discloses “remote access to the heating system for the dental handpiece during cleaning, as claimed” (06/06/05 action at page 4). It is assumed that the action means this to disclose “wherein the heating device can be deactivated via an external signal disabling the switch when the medium is intended for the purpose of at least one of cleaning and disinfecting the spray handpiece” as claimed by claim 16. However, the action does not allege, nor does Rainey disclose a “Dental spray handpiece comprising: a heating device which can be switched on and switched off via a switch, for a medium flowing therethrough...” Further, the action alleges that West discloses “a manual on/off switch [that] can be used to shut down the heater system, when desired, which could be effected during cleaning.” However, as discussed above, West’s manual on/off switch controls the operation of the entire module and not the heating element alone (col. 8, lines 37-39). Because neither Rainey nor West teaches each and every element of claim 16, the references do not anticipate claim 16.

Examiner’s “Response to Argument”

The applicant amends claim 1 to more fully define the external control features of the handpiece. Also, the applicant submits that the “external control signal” is fully defined in relation to terminals VCC and V_{on} as either a “switch-on signal” or a “switch-off signal” to

Application No.: 10/780,272
Amendment dated January 17, 2006
Reply to Office Action of November 16, 2005

Docket No.: 30815/27597

control media heating in the handpiece at page 8, lines 19-31 and page 9, lines 1-15. Further, the action improperly characterizes claim 1 as “only defin[ing] an off/on switch and a further switch to be controlled in dependence on an external signal” where prior art references disclosing “remote control” elements either anticipate the application or render the application obvious (11/16/05 action at page 2). As discussed above and as previously submitted in applicant’s 01/28/05 and 08/15/05 amendments (at page 5 and 6, respectively) claim 1 does not disclose “remote control” of the handpiece. Because no cited reference anticipates the application or renders it obvious, the amended application is in condition for allowance.

CONCLUSION

In view of the above remarks, the applicant respectfully requests favorable reconsideration and passage to issuance of this application. The applicant invites the examiner to contact the undersigned attorney with any questions regarding this response or the application as a whole. If there are any additional fees or refunds required, the Commissioner is directed to charge or debit Deposit Account No. 13-2855

Dated: January 17, 2006

Respectfully submitted,

By 

Anthony G. Sitko

Registration No.: 36,278
MARSHALL, GERSTEIN & BORUN LLP
233 S. Wacker Drive, Suite 6300
Sears Tower
Chicago, Illinois 60606-6357
(312) 474-6300
Attorney for Applicant